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10/058,175

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Joshua Gee-Yuen Mahowald

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HUNTON & WILLIAMS LLP  
INTELLECTUAL PROPERTY DEPARTMENT  
1900 K STREET, N.W.  
SUITE 1200  
WASHINGTON, DC 20006-1109

EXAMINER

ALBERTALLI, BRIAN LOUIS

ART UNIT

PAPER NUMBER

2626

DATE MAILED: 10/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/058,175

Applicant(s)

MAHOWALD ET AL.

Examiner

Brian L. Albertalli

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

1. The amendments to the claims have been entered. Claims 1 and 7 are currently amended.

### ***Response to Arguments***

2. Applicant's arguments filed 31 July 2006 have been fully considered but they are not persuasive.

Regarding Applicant's assertion that Beith et al. do not disclose "an n-best filter element" (see page 8, 2<sup>nd</sup> full paragraph), one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Furthermore, it is noted that the claims define the functionality of an n-best filter element as "operative to request verification from a list of possible matches for an audibly-uttered response".

Equivalently, Beith et al. disclose computer program code that cycles through the best matches to see if the user verifies one of the recognition results (column 9, line 66 through column 10, line 15). Therefore, the combination of Motorola (which discloses a hierarchical set of functional elements) and Beith et al. disclose "an n-best filter element" as defined by the claims.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning (see page 8, 3<sup>rd</sup> full

paragraph), it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In this case, the Examiner has asserted throughout prosecution that the advantages of including an n-best list filter feature include greatly improving the accuracy and increasing user confidence in the system, because such knowledge was well within the level of ordinary skill in the art at the time of invention (see response to arguments in previous Office Action, mail date 31 March 2006). Furthermore, contrary to the Applicant's assertion that the assertion is "wholly unsupported", the Examiner included the reference Balentine et al. (*How to Build a Speech Recognition Application*) as pertinent prior art in the previous Office Action and specifically pointed out that Balentine et al. teach querying the user in an n-best manner diminished the likelihood of error. Therefore, evidence has been provided as to why one of ordinary skill in the art would choose to implement the n-best list element in the way claimed.

Regarding applicant's assertion that AAPA "does not disclose the recitation alleged by the Office" with respect to claims 6 and 12 (see page 9, 1<sup>st</sup> paragraph), the Applicant is again directed to MPEP 2144.03. In particular, MPEP 2144.03 states "To adequately traverse such a finding, an applicant must specifically point out the supposed errors in the examiner's action, which would include stating why the noticed

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fact is not considered to be common knowledge or well-known in the art". Upon use of Official Notice in the first action on the merits (mail date 2 February 2005), the Applicant had an opportunity to request evidence in support of the Official Notice statement.

However, the applicant's response (received 5 July 2005) contained no such request.

Thus, absent a traversal of the Official Notice statement, "the examiner should clearly indicate in the next Office action that the common knowledge or well-known in the art statement is taken to be admitted prior art because applicant either failed to traverse the examiner's assertion of official notice or that the traverse was inadequate".

Therefore, the assertions presented with respect to claims 6 and 12 are supported by the AAPA.

3. Additionally, the amendments fail to overcome the rejections under 35 U.S.C. 101 and further raise new rejections under 35 U.S.C. 112, first and second paragraph, as outlined below.

### ***Claim Rejections - 35 USC § 101***

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 1-12 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As indicated in the previous Office Action, claims 1 and 7 are directed to a "markup language" comprising a plurality of "elements" and an "active voice page"

comprising a plurality of "elements", respectively. These elements do not define a series of acts to be performed and thus are not a "process" where a computer is executing the instructions. Rather, the claimed "elements" amount to a *data structure* with respect to an analysis under 35 U.S.C. 101. Data structure type computer programs must be claimed as a computer-readable medium encoded with a computer program. Conversely, claim 1 recites a computer readable medium "comprising" code while claim 7 recites a voice page "in" a computer-readable storage medium.

Therefore, claims 1-12 are directed to non-statutory subject matter.

### ***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 1 and 7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 1 and 7 are directed to "A computer-readable storage medium comprising code programmed in a markup language" and "An active voice page in a computer-readable storage medium", respectively. The "computer-readable storage medium" language was added to overcome a rejection under 35 U.S.C. 101 made in the previous Office Action. However a review of the

specification indicates that there is no clear support for computer readable storage mediums. While the specification recites "markup languages" and "active voice pages" there is no clear disclosure of an embodiment of those markup languages and active voice pages encoded in a computer readable storage medium.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As indicated above, there is no clear disclosure of an embodiment of the invention wherein markup languages or voice pages which are encoded in computer readable storage mediums. Therefore, the metes and bounds of the claimed computer readable storage medium cannot be determined from the disclosure as a whole.

Furthermore, with respect to claims 2-6, while claim 1 is now directed to "A computer-readable storage medium" claims 2-6 refer to "The markup language of claim 1". Therefore, this raises question as to whether claim 1 is directed to the storage medium, or simply to the markup language itself.

### ***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1-5 and 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Motorola (*VoxML 1.1 Language Reference*), in view of Beith et al. (U.S. Patent 6,449,496).

In regard to claims 1 and 7, Motorola discloses a markup language (VoxML) for facilitating voice-enabled communication between a voice service system and an individual and an active voice page comprising:

a hierarchical set of functional elements that define the capabilities of the markup language (page 2, Structure of a VoxML Document, lines 1-2), comprising:

a dialog element that defines a unit of interaction between the voice service system and an individual (page 13, the DIALOG element defines the basic unit of context within a VoxML application, lines 1-4);

an input element contained in the dialog element and operative to request from an individual during execution of a voice service (STEP element has an associated PROMPT element to present a request to a user, and an INPUT element to define the valid user input, page 46, STEP element, lines 1-3; page 19, INPUT element, lines 1-3; and page 40, PROMPT element, lines 1-2);

whereby one or more of the elements are arranged to define a voice service (interactive speech application, page 1, What is VoxML?).



Motorola additionally discloses that it is sometimes necessary to double check some information that a user has provided in a voice service environment and that providing an element to confirm the user input is easier for the developer (page 5, ACK element, lines 1-5).

Motorola does not disclose an n-best list filter element to request verification from a list of possible matches and do not disclose a computer readable storage medium.

Beith et al. disclose a method for requesting verification from a list of possible matches for an audibly-uttered user response (Fig. 7B, if multiple recognition results match, the method cycles through the best matches to see if the user verifies one of the recognition results in step 336, column 9, line 66 through column 10, lines 12-15). Beith et al. further disclose a computer readable storage medium (column 1, lines 61-63).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Motorola so that the ACK element requested user verification for a list of possible matches using the method disclosed by Beith et al., because such feedback greatly improves the accuracy and increases the user confidence in the system. Further, it would have been obvious to one of ordinary skill in the art at the time of invention to encode the markup language on a computer readable storage medium, because this would allow the markup language to be implemented as taught by Beith et al. (column 1, lines 12-15).

In regard to claims 2 and 8, the method disclosed by Beith et al. used in the combination of Motorola and Beith et al., as applied to claims 1 and 7, above, operates

to cause a processing system to generate a list of possible matches for a received audible utterance (multiple name matches are sorted, Beith et al., column 9, lines 66-67).

In regard to claims 3 and 9, the method disclosed by Beith et al. used in the combination of Motorola and Beith et al., as applied to claims 1 and 7, above, comprises a namespace attribute that stores results from a grammar that are confirmed as not matching the utterance (see Beith et al., Fig. 7B, the method cycles through the list of possible recognition matches, moving to the next best match at step 346 when the possible recognition result is incorrect; the method, then, must necessarily store the results that are confirmed as not matching the utterance so that each possible recognition candidate is only presented one time to the user).

In regard to claims 4 and 10, Motorola discloses that the acknowledgement element comprises an expression attribute (page 5, Examples, in line 11 of the example code, the VALUE NAME="type" specifies the answer given in the input element, lines 5-9 of the example, is to be verified).

In regard to claims 5 and 11, the method disclosed by Beith et al. used in the combination of Motorola and Beith et al., as applied to claims 1 and 7, above, specifies a loop to go through the list of possible matches for the utterance (when the user replies

"no", the next best match is retrieved and presented to the user until all possible matches have been presented, Beith et al., column 10, lines 5-9).

12. Claims 6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Motorola in view of Beith et al., and further in view of Applicant's Admitted Prior Art.

In regard to claims 6 and 12, neither Motorola nor Beith et al. disclose that an error announcement is made to announce when a match is not found.

The Applicant's admitted prior art discloses it is notoriously well known and recognized in the art to provide the user with an announcement that no match has been found, such as "I did not understand" or requesting the user to repeat the utterance, so the user can confirm whether the action associated with the utterance has been properly executed or not.

It would have been obvious to one of ordinary skill in the art at the time of invention to further modify the combination of Motorola and Beith et al. to announce that no match was found, because it is a widely appreciated and applied technique to supply feedback when a command is not understood.

13. Claims 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Motorola, in view Beith et al., and further in view of Ladd et al. (U.S. Patent 6,269,336).

In regard to claim 13, Motorola discloses an XML-based page comprising (page 1, What is VoxML?, line 1):

at least one dialog element comprising content for delivery to an identified user during an interactive voice broadcast (page 13, the DIALOG element defines the basic unit of context within a VoxML application, which comprises all of the content for delivery to a user, lines 1-4);

at least one input element contained within the at least one dialog element, the at least one input element defining input to be received from the identified user during the interactive voice broadcast (STEP element has an associated PROMPT element to present a request to a user, and an INPUT element to define the valid user input, page 46, STEP element, lines 1-3; page 19, INPUT element, lines 1-3; and page 40, PROMPT element, lines 1-2);

Motorola additionally discloses that it is sometimes necessary to double check some information that a user has provided in a voice service environment and that providing an element to confirm the user input is easier for the developer (page 5, ACK element, lines 1-5).

Motorola does not disclose an n-best list filter element to request verification from a list of possible matches and do not disclose a computer readable storage medium.

Beith et al. disclose a method for requesting verification from a list of possible matches for an audibly-uttered user response (Fig. 7B, if multiple recognition results match, the method cycles through the best matches to see if the user verifies one of the recognition results in step 336, column 9, lines 66-67 and column 10, lines 12-15).

Beith et al. further disclose a computer readable storage medium (column 1, lines 61-63).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Motorola so that the ACK element requested user verification for a list of possible matches using the method disclosed by Beith et al., because such feedback greatly improves the accuracy and increases the user confidence in the system. Further, it would have been obvious to one of ordinary skill in the art at the time of invention to encode the markup language on a computer readable storage medium, because this would allow the markup language to be implemented as taught by Beith et al. (column 1, lines 12-15).

Neither Motorola nor Beith et al. disclose that the XML-based page is executed in a call server.

Ladd et al. disclose a call server (Fig. 3, communication 212) that engages a user in a dialog based on the content of VoxML voice pages (column 6, lines 13-24).

It would have been obvious to one of ordinary skill in the art at the time of invention to execute the voice pages created by the combination of Motorola and Beith et al. on a call server as disclosed by Ladd et al. because call servers enable user to access information from any location in the world using voice inputs, as taught by Ladd et al. (column 2, lines 40-43 and lines 48-49).

In regard to claim 14, the method disclosed by Beith et al. used in the combination of Motorola, Beith et al., and Ladd et al., as applied to claim 13, above, operates to cause a processing system to generate a list of possible matches for a

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received audible utterance (multiple name matches are sorted, Beith et al., column 9, lines 66-67).

In regard to claim 15, the method disclosed by Beith et al. used in the combination of Motorola, Beith et al., and Ladd et al., as applied to claim 13, above, comprises a namespace attribute that stores results from a grammar that are confirmed as not matching the utterance (see Beith et al., Fig. 7B, the method cycles through the list of possible recognition matches, moving to the next best match at step 346 when the possible recognition result is incorrect; the method, then, must necessarily store the results that are confirmed as not matching the utterance so that each possible recognition candidate is only presented one time to the user).

In regard to claim 16, Motorola discloses that the acknowledgement element comprises an expression attribute (page 5, Examples, in line 11 of the example code, the VALUE NAME="type" specifies that the answer given in the input element, lines 5-9 of the example, is to be verified).

In regard to claim 17, the method disclosed by Beith et al. used in the combination of Motorola, Beith et al., and Ladd et al., as applied to claim 13, above, specifies a loop to go through the list of possible matches for the utterance (when the user replies "no", the next best match is retrieved and presented to the user until all possible matches have been presented, Beith et al., column 10, lines 5-9).

14. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Motorola, in view of Beith et al., in further view of Ladd et al., and further in view of Applicant's Admitted Prior Art.

In regard to claim 18, Motorola, Beith et al., and Ladd et al. do not disclose that an error announcement is made to announce when a match is not found.

The Applicant's admitted prior art discloses it is notoriously well known and recognized in the art to provide the user with an announcement that no match has been found, such as "I did not understand" or requesting the user to repeat the utterance, so the user can confirm whether the action associated with the utterance has been properly executed or not.

It would have been obvious to one of ordinary skill in the art at the time of invention to further modify the combination of Motorola and Beith et al. to announce that no match was found, because it is a widely appreciated and applied technique to supply feedback when a command is not understood.

### ***Conclusion***

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian L. Albertalli whose telephone number is (571) 272-7616. The examiner can normally be reached on Mon - Fri, 8:00 AM - 5:30 PM, every second Fri off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on (571) 272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BLA 10/5/06

  
**DAVID HUDSPETH**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**